IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicants:	P. Gopalakrishnan, et al.	**Examiner:** Shingles, Kristie D.	
Serial No.:	09/886,306	**Group Art Unit:** 2821	
Filed:	June 21, 2001	**Docket:** YOR920010231US1 (8728-505)	
For:	INTELLIGENT CACHING AND NETWORK MANAGEMENT BASED ON LOCATION AND RESOURCE ANTICIPATION		

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APPEAL BRIEF

In response to the Final Office Action dated March 21, 2006 and the Advisory Action mailed on July 17, 2006 finally rejecting Claims 1-7 and 9-34 under 35 U.S.C. §103, Applicant appeals pursuant to the Notice of Appeal filed on August 17, 2006 and submits this Appeal Brief.

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1. Real Party in Interest

The real party in interest is International Business Machines Corporation, the assignee of the entire right, title, and interest in and to the subject application by virtue of an assignment of record.

2. Related Appeals and Interferences

None.

3. Status of Claims

Claims 1-7 and 9-34 are pending, stand rejected, and are under appeal. A copy of the Claims as pending is presented in the Appendix.

4. Status of Amendments

Claims 1, 6, 9, 10, 14, 15, 17, 22-24, 26 and 31-33 were amended and Claim 8 cancelled by the Amendment Under 37 C.F.R. §1.111 filed September 1, 2005. This Amendment was entered.

5. Summary of Claimed Subject Matter

The present invention relates to predicting future locations and application needs of a user, and intelligently caching the information needed in the user's device or downloaded in advance (or scheduled to be downloaded later) to a local or remote device.

Referring to Claim 1 a system for intelligent caching and network management (see FIG. 2, 100) includes a data source of contextual information representing needs of a user (see for example, FIG. 2, 108), a contextual system, which determines settings based on the contextual information and determines services and devices available for the user, in accordance with the contextual information (see for example, FIG. 2, 112, 114, and 106), a predictor which receives the contextual information, the settings, the services available and the devices available and predicts the needs of the user to make resources available to the user in accordance with predictions (see for example, FIG. 2, 104), and a universal messaging system coupled to the predictor, wherein the universal messaging system provides message services to the user based on predictions by the predictor of current or future locations or activities of the user (see for example, FIG. 3, 101).

Referring to Claim 9, a system for intelligent caching and network management (see for example, FIG. 2, 100) includes a data source of event and time information representing a user's schedule (see for example, FIG. 2, 102), a location database including resource information about network services, application services, devices, hardware resources and software resources that are available for the user at one or more locations (see for example, FIG. 2, 106), and a predictor which receives the event and time information and the resource information to predict a location of the user and additional resources needed by the user at the predicted location such

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that the additional resources are transferred to the user at the predicted location when and where the additional resources are needed (see for example, FIG. 2, 104).

Referring to Claims 17 and 26, a method for intelligent caching and network management includes representing a user's schedule with event and time information (see for example, FIG. 2, 102, page 9, line 14 to page 10, line 2, and page 15, lines 12-13), obtaining, from a location database, resource information about network services, application services, devices, hardware resources and software resources which are available at one or more locations for transferring information to the user in accordance with the user's schedule (see for example, page 16, lines 7-9), and predicting a location of the user and additional resources needed by the user at the predicted location based on the event and time information and the resource information of the predicted location (see for example, FIG. 2, 104 and page 10, line 22 to page 11, line 4). With respect to Claim 26 in particular, a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for intelligent caching and network management is described at for example, page 8, line 12 to page 9, lines 4.

Referring now to dependent Claims 2 and 10, a user preference profile includes user preferences employed by the predictor to predict a location of the user and resources needed at the location (see page 10, lines 8-15).

6. **Grounds of Rejection to be Reviewed on Appeal**

A. The Claim Rejections Under 35 U.S.C. 103 Are Legally Deficient

i. Claims 1, 9, 17 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rankin (US 6,879,838) in view of Wieczorek (US 6,125,278).

ii. Claims 2 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Rankin in view of Wieczorek.

7. **Argument**

A. **The Claim Rejections Under 35 U.S.C. 103 Are Legally Deficient.**

In rejecting claims under 35 U.S.C. §103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532 (Fed. Cir. 1993). The burden of presenting a *prima facie* case of obviousness is only satisfied by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Fine, 837 F.2d 1071, 1074 (Fed. Cir. 1988). A *prima facie* case of obviousness is established when the teachings of the prior art itself would appear to have suggested the claimed subject matter to one of ordinary skill in the art. In re Bell, 991 F.2d 781, 782 (Fed. Cir. 1993). If the Examiner fails to establish a *prima facie* case, the rejection is improper and must be overturned. In re Rijckaert, 9 F.3d at 1532 (citing In re Fine, 837 F.2d at 1074).

i. Claims 1, 9, 17 and 26

It is respectfully submitted that at the very least, Rankin and Wieczorek are legally deficient to establish a prima facie case of obviousness against Claims 1, 9, 17 and 26.

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Referring to Claims 9, 17 and 26, the claim rejections are seemingly based on an improper parsing of the claim language to fit the claims to the teachings of the reference without due consideration given to the plain meaning of the claim language.

For example, Claim 9 recites, in part,

a data source of event and time information representing a user's schedule;

a location database including resource information about [resources] *available for the user at one or more locations; and*

a predictor which receives the event and time information and the resource information to predict a location of the user and additional resources needed by the user at the predicted location . . .

The Examiner acknowledges, on page 3 of the Final Action, that Rankin does not teach the claimed user's schedule and the predictor, and relies on Wieczorek to cure the deficiencies of Rankin. Wieczorek does not disclose or suggest, *a predictor which receives event and time information, the event and time information representing a user's schedule . . . to predict a location of the user. . .* essentially as recited in Claim 9. Claims 17 and 26 include similar limitations.

Wieczorek teaches a method of tracking a subscriber unit (a mobile wireless unit) and obtain location information supplied by the subscriber unit to predict a future location of the subscriber unit so that the system can allocate communication resources in anticipation of expected resource requirements for the subscriber unit at the predicted future location (e.g., resources needed for executing "hand-offs" as the user passes through different sites within the subscriber unit coverage area) (see, e.g., Col. 2, lines 10-24 and Col. 4, lines 50-65).

In this regard, Wieczorek does not teach or suggest *a predictor which receives event and*

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time information, the event and time information representing a user's schedule . . . to predict a location of the user. The prediction of <u>Wieczorek</u> is based solely on the location of the subscriber unit during *actual use* of the subscriber unit, for the purpose of providing resources needed by the subscriber unit while it is in operation. There is nothing in <u>Wieczorek</u> that teaches or suggests predicting the location of the user based on event and time information representing the user's schedule, essentially as claimed in Claims 9, 17 and 26.

In addition, <u>Wieczorek</u> is concerned with the subscriber unit as it is being used, regardless of who is using the subscriber unit. For example, a group of three people can use a single subscriber unit such as a mobile phone at different times, but the <u>Wieczorek</u> system will only predict the location of the subscriber unit as it is being used, regardless of, and without consideration of a schedule of a current user. Moreover, the <u>Wieczorek</u> system only predicts locations of the subscriber unit as it is being used within the coverage area of the communications system (Col. 4, lines 55-58). The <u>Wieczorek</u> system does not, and cannot, predict future locations while the subscriber unit is not being operated. For example, <u>Wieczorek</u> does not teach or suggest a system that utilizes a user's schedule to predict that the user may be using the subscriber unit at some location in the future and ensure that resources are available at that predicted location for using the subscriber unit.

Referring more particularly to Claims 17 and 26, <u>Wieczorek</u> does not teach or suggest *representing a user's schedule with event and time information . . .* and *predicting a location of the user and additional resources needed by the user at the predicted location based on the event and time,* for at least the reasons discussed above with respect to Claim 9.

Moreover, with respect to Claim 1, the combination of <u>Rankin</u> and <u>Wieczorek</u> does not disclose *a universal messaging system coupled to the predictor, wherein the universal messaging*

system provides message services to the user based on predictions by the predictor of current or future locations, activities or needs of a user, as recited in Claim 1. Indeed, the Final Action fails to address this limitation. In this regard, the Final Action fails to present a prima facie case of obviousness against Claim 1.

For at least the above reasons, Claims 1, 9, 17 and 26 are patentable and nonobvious over the combination of <u>Rankin</u> and <u>Wieczorek</u>. Accordingly, the rejection of Claims 1, 9, 17 and 26 should be overruled.

ii. Claims 2 and 10

It is respectfully submitted that at the very least, <u>Rankin</u> and <u>Wieczorek</u> are legally deficient to establish a prima facie case of obviousness against Claims 2 and 10. While Claims 2 and 10 are believed to be allowable for at least the reasons given for Claims 1 and 9, respectively, at least these claims are believed to be allowable for additional reasons.

Claim 2 claims, a user preference profile which includes user preferences employed by the predictor to predict a location of the user and resources needed at the location. Claim 10 includes a substantially similar limitation.

<u>Rankin</u> teaches preferences which filter unnecessary information (see col. 4, liens 61-66). <u>Rankin</u> does not teach or suggest user preferences employed by the predictor to predict resources needed, essentially as claimed in Claims 2 and 10. <u>Rankin's</u> user preferences are merely a filter on information. Nowhere does <u>Rankin</u> teach or suggest a predictor for predicting resources needed, much less resources need according to user preferences. Therefore, <u>Rankin</u> fails to teach or suggest all the limitations of Claims 2 and 10.

<u>Wieczorek</u> teaches predicting future locations and expected resource requirements of a

subscriber unit using, for example, location history data (see col. 2, lines 10-24 and col. 3, lines 6-10). History data is not analogous to user preferences, for example, as shown above, history according to Wieczorek relates only to a subscribing unit and not a particular user. Wieczorek does not teach or suggest user preferences, much less user preferences used in predicting resources needed. Therefore, Wieczorek fails to cure the deficiencies of Rankin.

The combined teachings of Wieczorek and Rankin fail to teach or suggest all the limitations of Claims 2 and 10. Accordingly, the rejection of Claims 2 and 10 should be overruled

B. <u>CONCLUSION</u>

The claimed invention is not disclosed or suggested by the teachings of the applied prior art references, either alone or in combination. Moreover, the Examiner has failed to establish a case of anticipation of the presently claimed method under 35 U.S.C. §103 over <u>Rankin</u> in view of <u>Wieczorek</u> with respect to independent Claims 1, 9, 17 and 26, and dependent Claims 2 and 10 for at least the reasons noted above. Claims 2-7 depend form Claim 1. Claims 10-16 depend from Claim 9. Claims 18-25 depend from Claim 17. Claims 27-34 depend from Claim 26. The dependent claims are believed to be allowable for at least the reasons given for the respective independent claims. Accordingly, it is respectfully requested that the Board overrule the rejections of Claims 1-7 and 9-34 under 35 U.S.C. §103.

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8. CLAIMS APPENDIX

1.   A system for intelligent caching and network management, comprising:

    a data source of contextual information representing needs of a user;

    a contextual system, which determines settings based on the contextual information and determines services and devices available for the user, in accordance with the contextual information;

    a predictor which receives the contextual information, the settings, the services available and the devices available and predicts the needs of the user to make resources available to the user in accordance with predictions; and

    a universal messaging system coupled to the predictor, wherein the universal messaging system provides message services to the user based on predictions by the predictor of current or future locations or activities of the user.

2.   The system as recited in claim 1, wherein the settings include a user preference profile which includes user preferences employed by the predictor to predict a location of the user and resources needed at the location.

3.   The system as recited in claim 2, wherein the user preferences are determined by past occurrences of user activities.

4.   The system as recited in claim 2, wherein the user preference profile includes manually entered data.

5.   The system as recited in claim 1, wherein the data source of contextual information includes a user itinerary.

6.   The system as recited in claim 1, wherein the devices available include a mobile communication device, a stationary communication device or a computer.

7.   The system as recited in claim 1, wherein the resources include a file, an application or data.

9.   A system for intelligent caching and network management, comprising:

a data source of event and time information representing a user's schedule;

a location database including resource information about network services, application services, devices, hardware resources and software resources that are available for the user at one or more locations ;

a predictor which receives the event and time information and the resource information to predict a location of the user and additional resources needed by the user at the predicted location such that the additional resources are transferred to the user at the predicted location when and where the additional resources are needed.

10.   The system as recited in claim 9, further comprising a user preference profile which includes user preferences employed by the predictor to predict the location of the user and resources needed at the location.

11.   The system as recited in claim 10, wherein the user preferences are determined by past occurrences of user activities.

12.   The system as recited in claim 10, wherein the user preference profile includes manually entered data.

13.   The system as recited in claim 9, wherein the data source of event and time information includes a user itinerary.

14.   The system as recited in claim 9, wherein the devices include a mobile communication device, a stationary communication device or a computer.

15.   The system as recited in claim 9, wherein the additional resources include a file, an application or data.

16.   The system as recited in claim 9, further comprising a universal messaging system coupled to the predictor, the universal messaging system being configured to provide message services in accordance with the needs of the user predicted by the predictor.

17.   A method for intelligent caching and network management, comprising:

representing a user's schedule with event and time information;

obtaining, from a location database, resource information about network services, application services, devices, hardware resources and software resources which are available at

one or more locations for transferring information to a the user in accordance with the user's schedule; and

predicting a location of the user and additional resources needed by the user at the predicted location based on the event and time information and the resource information of the predicted location.

18.   The method as recited in claim 17, further comprising the step of providing a user preference profile which includes user preferences employed by the predictor.

19.   The method as recited in claim 17, wherein the step of providing the user preference profile includes determining user preferences based on by past occurrences of user activities.

20.   The method as recited in claim 17, wherein the step of providing the user preference profile includes determining user preferences based on manually entered data.

21.   The method as recited in claim 17, wherein the event and time information includes a user itinerary.

22.   The method as recited in claim 17, wherein the devices include a mobile communication device, a stationary communication device or a computer.

23.   The method as recited in claim 17, wherein the additional resources include a file, an application or data.

24.   The method as recited in claim 17, further comprising the step of transferring the additional resources to the user at the predicted location when and where the additional resources are needed.

25.   The method as recited in claim 24, wherein the step of transferring the resources to the user includes blocking unwanted messages to the user.

26.   A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for intelligent caching and network management, the method steps comprising:

representing a user's schedule with event and time information;

obtaining, from a location database, resource information about network services, application services, devices, hardware resources and software resources which are available at one or more locations for transferring information to the user in accordance with the user's schedule; and

predicting a location of the user and additional resources needed by the user at the predicted location based on the event and time information and the resource information of the predicted location.

27.   The program storage device as recited in claim 26, further comprising the step of providing a user preference profile which includes user preferences employed by the predictor.

28.   The program storage device as recited in claim 27, wherein the step of providing the user preference profile includes determining user preferences based on by past occurrences of user activities.

29.   The program storage device as recited in claim 27, wherein the step of providing the user preference profile includes determining user preferences based on manually entered data.

30.   The program storage device as recited in claim 26, wherein the event and time information includes a user itinerary.

31.   The program storage device as recited in claim 26, wherein the devices include a mobile communication device, a stationary communication device or a computer.

32.   The program storage device as recited in claim 26, wherein the additional resources include a file, an application or data

33.   The program storage device as recited in claim 26, further comprising the step of transferring the additional resources to the user at a the predicted location when and where the additional resources are needed

34.   The program storage device as recited in claim 33, wherein the step of transferring the resources to the user includes blocking unwanted messages to the user.